

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for the encapsulation of ~~uranium~~-uranium metal which comprises treating the metal with an encapsulant which comprises a cementitious material and curing said cementitious material, wherein said process additionally comprises the provision of means for the minimisation of the corrosion of said metal, the mode for the provision of said means for the minimisation of corrosion comprising the provision of a source of oxygen within the cement matrix, wherein the provision of said source of oxygen within the cement matrix comprises either:

- (a) facilitating enhanced oxygen access from the atmosphere by the incorporation in the cementitious material of:
 - (i) at least one air entraining agent, wherein said entraining agent comprises at least one anionic or non-ionic surfactant, or
 - (ii) cenospheres; or
- (b) including an independent source of oxygen, wherein said independent source of oxygen comprises at least one peroxide.

2. (Previously Presented) A method as claimed in claim 1 wherein said uranium metal is comprised in waste material.

3. (Previously Presented) A method as claimed in claim 1 wherein said means for the minimisation of the corrosion of said metal comprises means for the prevention of the corrosion of said metal.

4. - 6 (Canceled)

7. (Currently Amended) A method as claimed in claim 1 wherein the mode for the provision of said means for the minimisation of corrosion additionally comprises facilitating the minimisation of the water content of the matrix.

8. - 9 (Canceled)

10. (Currently Amended) A method as claimed in ~~claim 8~~claim 1 wherein said cementitious material comprises 0.01-2% (w/w) of an air-entraining agent.

11. (Canceled)

12. (Currently Amended) A method as claimed in ~~claim 11~~claim 1 wherein said cementitious material comprises 0.01-30% (w/w) of cenospheres.

13. (Canceled)

14. (Currently Amended) A method as claimed in ~~claim 13~~claim 1 wherein said peroxide comprises an inorganic peroxide.

15. (Currently Amended) A method as claimed in claim 14 wherein said inorganic peroxide comprises a peroxide of a metal from ~~Group H~~Group II of the Periodic Table.

16. (Previously Presented) A method as claimed in claim 15 wherein said peroxide comprises calcium peroxide or magnesium peroxide.

17. (Currently Amended) A method as claimed in ~~claim 13~~claim 1 wherein said cementitious material comprises 0.01-10% (w/w) peroxide.

18. (Previously Presented) A method as claimed in claim 7 wherein the means for facilitating the minimisation of the water content of the matrix comprises the addition of at least one superplasticiser to the cementitious material.

19. (Currently Amended) A method as claimed in ~~claim 15~~claim 18 wherein said at least one superplasticiser comprises at least one surfactant.

20. (Previously Presented) A method as claimed in claim 19 wherein said surfactant comprises a polyacrylate or polycarboxylate.

21. (Previously Presented) A method as claimed in claim 18 wherein said cementitious material comprises 0.01-5% (w/w) of superplasticiser.

22. (Previously Presented) A method as claimed in claim 1 wherein said cementitious material comprises Portland Cement.

23. (Previously Presented) A method as claimed in claim 1 wherein the cementitious material additionally comprises one or more fillers.

24. (Previously Presented) A method as claimed in claim 23 wherein said-filler is selected from pulverised fuel ash, finely divided silica and organic and inorganic fluidising agents.

25. (Previously Presented) A method as claimed in claim 1 wherein the cementitious material is provided in the form of an aqueous composition.

26. (Previously Presented) A method as claimed in claim 25 wherein the water content of the composition is in the region of 30-50% (w/w).

27. (Currently Amended) A method as claimed in claim 25 wherein the water content of the composition is in the region of 10-50% (w/w). ~~28. A method as claimed in any preceding claim wherein the uranium metal is placed in an appropriate container and a cementitious material is added and allowed to at least partially cure.~~

28. (Currently Amended) A method as claimed in claim 1 wherein the uranium metal is placed in an appropriate container and a cementitious material is added and allowed to at least partially cure.

29. (Previously Presented) A method as claimed in claim 28 wherein the container is subsequently capped.

30. (Previously Presented) A method as claimed in claim 28 wherein the container comprises a drum having a capacity in the region of 500 litres.

31. (Currently Amended) A method as claimed in ~~claim 1~~claim 28 which comprises mixing of said cementitious material with said means for the minimisation of the corrosion of said metal.

32. (Previously Presented) A method as claimed in claim 31 wherein said mixing is effected in the container into which the uranium metal is placed.

33. (Previously Presented) A method as claimed in claim 31 wherein said mixing is carried out externally to the said container.

34. (Previously Presented) A method as claimed in claim 33 wherein said mixing is performed in a batchwise fashion prior to addition of the cementitious material to the container.

35. (Previously Presented) A method as claimed in claim 33 wherein said mixing takes place in-line prior to the introduction of the cementitious material into the container.

36. (Currently Amended) A method for the storage of uranium metal which comprises encapsulation of the ~~material-metal~~ metal according to the method of claim 1 in a cured cementitious material comprising means for the minimisation of the corrosion of said metal.